(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 22 September 2005 (22.09.2005)

PCT

(10) International Publication Number WO 2005/087820 A1

(51) International Patent Classification⁷: B01J 31/02

C08F 4/654,

(21) International Application Number:

PCT/KR2005/000631

(22) International Filing Date: 7 March 2005 (07.03.2005)

(25) Filing Language:

Korean

(26) Publication Language:

English

(30) Priority Data:

10-2004-0016604

KR 11 March 2004 (11.03.2004)

- (71) Applicant (for all designated States except US): SK COR-PORATION [KR/KR]; 99, Seorin-dong, Jongro-gu, Seoul 110-110 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): OK, Myung Ahn [KR/KR]; 385-28, Doryong-dong, Yuseong -gu, Daejeon 305-340 (KR). SHIN, Dae Ho [KR/KR]; 304-1303, Expo Apt., Jeonmin-dong, Yuseong -gu, Daejeon 305-761 (KR). HAHN, Jong Sok [KR/KR]; 211-1702, Expo Apt., Jeonmin-dong, Yuseong -gu, Daejeon 305-761 (KR). LEE, Mal Woo [KR/KR]; 2-1306, Sujeong Town Apt. Dunsan-dong, Seo-gu, Daejeon 302-775 (KR). RYU, Seoung Woong [KR/KR]; 103-1006, Chunggu-Nare Apt., Jeonmin-dong, Yuseong -gu, Daejeon 305-729 (KR).

- (74) Agent: LEE & PARK; 6th Fl., Changsang Bldg., 1543-12, Seocho 3-dong, Seocho-gu, Seoul 137-872 (KR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR PREPARING ETHYLENE POLYMERIZATION CATALYSTS

(57) Abstract: The present invention relates to a method of preparing an ethylene polymerization catalyst, which comprises reacting a solid reaction product of magnesium halide (such as magnesium chloride), alcohol, an organic magnesium compound, and a halogen compound with a transition metal compound and an electron donor. When ethylene and a-olefin are co-polymerized by slurry polymerization in the presence of the above catalyst, the amount of wax component extracted by the polymerization solvent is very low, and the polymer particles do not agglomerate. The catalyst is prepared in the form of so uniform particles that the resultant polymer has uniform particle morphology, thus increasing bulk density.

